4.2.5.8 Socioeconomics

No Action Alternative

Regional Economy Characteristics. Total employment in the REA is projected to increase by approximately 1 percent annually between 1995 and 2000, reaching about 488,100 in the latter year. Long-range projections indicate slower growth after the year 2000, when employment would increase by less than 1 percent annually and reach approximately 665,000 in 2040. Unemployment in the REA was 4.9 percent in 1994 and is expected to remain at this level into the near future. Per capita income is projected to increase from approximately $18,190 in 1995 to $26,368 in 2040. Projections for the No Action Alternative are presented in Table L.1–46.

Population and Housing. Population in the ROI is projected to increase from approximately 518,600 in 1995 to 751,800 by 2040. The total number of available housing units in the ROI is projected to increase from about 214,700 in 1995 to 311,200 in 2040. Population and housing projections for the No Action Alternative are presented in Tables L.1–47 and L.1–48, respectively.

Community Services. Education, public safety, and health care characteristics are used to assess the level of community services in the ORR ROI. School enrollments are projected to increase from about 83,340 students in 1995 to 120,810 students by 2040. The current student-to-teacher ratio is 16.2:1. To maintain this level of service, the number of teachers in the ROI would need to increase from approximately 5,132 in 1995 to 7,442 in 2040. These projections are presented in Tables L.1–49 and L.1–50.

The projected numbers of sworn police officers and firefighters serving the ROI communities over the period 1995 to 2040 are shown in Tables L.1–51 and L.1–52, respectively. Under No Action, the number of sworn police officers is projected to increase from approximately 897 in 1995 to 1,299 in 2040 to maintain the current service level of 1.7 sworn officers per 1,000 persons. The number of firefighters in the ROI would need to increase from about 1,120 in 1995 to 1,624 in 2040 to maintain the present service level of 2.2 firefighters per 1,000 persons.

Hospital occupancy rates are based on current capacity. These rates and the estimated number of physicians serving the ROI population between 1995 and 2040 are presented in Tables L.1–53 and L.1–54, respectively. Hospital occupancy rates are projected to increase from approximately 65 percent in 1995 to about 93 percent in 2040. To maintain the current physician-to-population ratio of 2.5 physicians per 1,000 persons, the total number of physicians in the ROI would need to increase from approximately 1,322 in 1995 to 1,917 in 2040.

Local Transportation. Any increases in traffic would be due to projected growth in the area unrelated to DOE activity. [Text deleted.]

Upgrade Alternative

Preferred Alternative: Modify Existing Y–12 Plant for Continued Highly Enriched Uranium Storage

Of all the long-term storage alternatives being considered at ORR, the upgrade existing HEU storage facilities option would create the smallest socioeconomic changes within the region. This alternative would generate a total of 132 jobs (66 direct and 66 indirect) during construction and a total of 395 jobs (111 direct and 284 indirect) during operation. In both phases, there would be sufficient available labor in the REA to fill both direct and indirect jobs created from this alternative. Therefore, no workers would in-migrate to the REA and no change to the REA population would result beyond No Action projections.

Regional Economy Characteristics. Due to the small number of workers required during construction and operation phases, the regional economy would remain virtually unchanged compared to No Action projections. Total employment would increase by much less than 1 percent during construction and operation of the facilities. Unemployment would decrease from 4.9 to 4.8 percent during construction and operation. Per capita income would also remain virtually unchanged, increasing by much less than 1 percent over the No Action alternative (Socio 1996a).

Population and Housing, Community Services, and Local Transportation. All newly created employment would be filled by the resident labor force. Therefore, there would be no change to the region's population beyond the No Action level. Accordingly, minimal impacts to the housing sector, community services, or local transportation would occur as a result of the construction and operation of these facilities.

Collocation Alternative

Construct New Plutonium Storage Facility; Maintain Existing Highly Enriched Uranium Storage Facilities at Y–12 Plant

To consolidate storage of Pu currently stored at multiple DOE sites, a new storage facility would need to be constructed at ORR. Existing buildings at Y–12 would continue to store ORR nonsurplus HEU material. Workers would in-migrate to fill a portion of the direct jobs created during construction and operation of this facility.

Regional Economy Characteristics. Construction would generate a total of 2,226 jobs (1,115 direct and 1,111 indirect). Operation of the facility would generate a total of 1,575 jobs (443 direct and 1,132 indirect). Total employment would increase by less than 1 percent over No Action projections during both construction and operation. Unemployment would decrease to 4.4 percent during construction and 4.6 percent during operation. Per capita income would increase by much less than 1 percent during both phases (Socio 1996a).

Population and Housing. The in-migration of workers during the construction and operation periods would increase the ROI population by much less than 1 percent over No Action projections. The larger increase would occur during construction. Some new housing may be needed. However, expected vacancies and historic housing construction rates indicate that housing would be available to accommodate the population growth (Socio 1996a).

Community Services. The ROI population growth would slightly increase the demand for some community services. Worker in-migration would lead to an increase in ROI school enrollments by about 40 students during construction and 2 students during operation. To maintain the No Action student-to-teacher ratio of 16.2:1, the number of teachers would have to increase by three during the construction period. Operation would not require any additional teachers (Socio 1996a). This additional need for teachers would be distributed over the various jurisdictions in the ROI, so the effect on any single school district would be minimal.

To maintain No Action level of service, no police officers and one firefighter would need to be hired during the construction period. No additional police officers or firefighters would be required to maintain No Action service levels during operation (Socio 1996a).

The small population increase would have a negligible effect on health services, increasing hospital occupancy by much less than 1 percent during construction and operation. The number of physicians in the ROI would need to increase by only one during construction to maintain the No Action service level. No additional physicians would be needed during operation (Socio 1996a).

Local Transportation. A total of 2,141 and 851 vehicle trips per day would be generated during the construction and operation phases, respectively. During construction, there would be a noticeable increase in the

volume-to-capacity ratio of Tennessee State Route 62, between Tennessee State Route 95 and Tennessee State Route 170. The road segment however, would continue to operate at level of service F, the lowest level of service. Traffic generated from facility operations would not affect the level of service on the road segments analyzed (Socio 1996a).

Construct New Plutonium Storage Facility and Modify Existing Highly Enriched Uranium Storage Facilities at Y–12 Plant

To consolidate storage of Pu currently stored at multiple DOE sites and improve HEU storage, a new Pu storage facility would need to be constructed and existing HEU facilities upgraded at ORR. Workers would in-migrate to fill a portion of the direct jobs created during construction and operation of these facilities.

Regional Economy Characteristics. Construction would generate a total of 2,316 jobs (1,155 direct and 1,161 indirect). Operation would generate a total of 1,969 jobs (554 direct and 1,415 indirect). Total employment would increase by less than 1 percent over No Action projections during both construction and operation. Unemployment would decrease from 4.9 percent to 4.4 percent during construction and 4.5 percent during operation. Per capita income would increase by less than 1 percent during both phases (Socio 1996a).

Population and Housing. The in-migration of workers during the construction and operation periods would increase the ROI population by much less than 1 percent over No Action projections. The larger increase would occur during construction. Some new housing may be needed. However, expected vacancies and historic housing construction rates indicate that housing would be available to accommodate the population increase (Socio 1996a).

Community Services. The additional population would slightly increase the demand for some community services. Worker in-migration would lead to an increase in ROI school enrollments by about 62 students during construction and 8 students during operation. To maintain the No Action student-to-teacher ratio of 16.2:1, the number of teachers would have to increase by four during the construction period. Operation would not require any additional teachers (Socio 1996a). This additional need for teachers would be distributed over the various jurisdictions in the ROI, so the effect on any single school district would be minimal.

To maintain No Action levels of service, two police officers and three firefighters would need to be hired during the construction period. No additional police officers or firefighters would be required to maintain No Action service levels during operation (Socio 1996a).

The small population increase would have a negligible effect on health services, increasing hospital occupancy by much less than 1 percent during construction and operation. The number of physicians in the ROI would need to increase by three during construction to maintain the No Action service level. No additional physicians would be needed during operation (Socio 1996a).

Local Transportation. A total of 2,337 and 1,064 vehicle trips per day would be generated during the construction and operation phases, respectively. During construction there would be a noticeable increase in the volume-to-capacity ratio of Tennessee State Route 62, between Tennessee State Route 95 and Tennessee State Route 170. The road segment however, would continue to operate at level of service F, the lowest level of service. Traffic generated from facility operations would not affect the level of service on the local road segments analyzed (Socio 1996a).

Construct New Plutonium and Highly Enriched Uranium Storage Facilities

To consolidate storage of Pu and HEU currently stored at multiple DOE sites, new storage facilities would need to be constructed at ORR. Workers would in-migrate to fill a portion of the direct jobs created during construction and operation of these facilities.

Regional Economy Characteristics. Construction would generate a total of 3,063 jobs (1,534 direct and 1,529 indirect). Operation would generate a total of 2,012 jobs (566 direct and 1,446 indirect). Total employment would increase by less than 1 percent over No Action projections during both construction and operation. Unemployment would decrease to 4.4 percent during construction and 4.5 percent during operation. Per capita income would increase by less than 1 percent during both phases (Socio 1996a).

Population and Housing. The in-migration of workers during the construction and operation periods would increase the ROI population by less than 1 percent over No Action projections. The larger increase would occur during construction. Some new housing may be needed. However, expected vacancies and historic housing construction rates indicate that housing would be available to accommodate the population growth (Socio 1996a).

Community Services. The ROI population growth would slightly increase the demand for some community services. Worker in-migration would lead to an increase in ROI school enrollments by about 223 students during construction and 6 students during operation. To maintain the No Action student-to-teacher ratio of 16.2:1, the number of teachers would have to increase by 14 during the construction period. Operation would not require any additional teachers (Socio 1996a). This additional need for teachers would be distributed over the various jurisdictions in the ROI, so the effect on any single school district would be minimal.

To maintain No Action level of service, only one police officer and firefighter would need to be hired during the construction period. No additional police officers or firefighters would be required to maintain No Action service levels during operation (Socio 1996a).

The small population increase would have a negligible effect on health services, increasing hospital occupancy by much less than 1 percent during construction and operation. The number of physicians in the ROI would need to increase by only one during construction to maintain the No Action service level. No additional physicians would be needed during operation (Socio 1996a).

Local Transportation. A total of 2,945 and 1,087 vehicle trips per day would be generated during construction and operation, respectively. During construction there would be a noticeable increase in the volume-to-capacity ratio of Tennessee State Route 62, between Tennessee State Route 95 and Tennessee State Route 170. The road segment however, would continue to operate at level of service F, the lowest level of service. Traffic generated from facility operations would not affect the level of service on the road segments analyzed (Socio 1996a).

Subalternative Not Including Strategic Reserve and Weapons Research and Development Materials

The requirements for each storage option considered would decrease slightly if strategic reserve and weapons R&D materials were not included for storage at ORR. This should result in a decrease in the number of required operation employees for each of the considered alternatives. Therefore, socioeconomic effects on the REA/ROI for the storage alternatives with no strategic reserve and weapons R&D materials should be equal to, or somewhat less than, the No Action Alternative, the Upgrade Alternative, and the Collocation Alternative. [Text deleted.]

Phaseout

Phasing out HEU storage at ORR would result in the loss of 476 total (direct and indirect) jobs in the REA. Should all personnel be phased out at the same time, unemployment would remain at the No Action estimate of 4.9 percent and per capita income would be reduced by much less than 1 percent (Socio 1996a).

Some displaced workers may out-migrate from the ROI to seek other employment opportunities. Under the bounding case (all unemployed workers and their families leaving the ROI at the same time), population would

decrease by less than 1 percent. Some of the projected ROI occupied housing units would likely become vacant as a result of population losses (Socio 1996a).

The out-migration of population during phaseout would slightly lessen the demand for community services. It is unlikely that communities would lower service levels unless decreased revenues made it necessary.

Region of influence school enrollments are projected to decrease by much less than 1 percent during the bounding case scenario for phaseout. The No Action student-to-teacher ratio of 16.2:1 could be maintained if the number of teachers does not decrease from predicted No Action levels by more than 13 (Socio 1996a).

During phaseout, the number of sworn police officers could not decrease from predicted No Action levels if the No Action service level of 1.7 officers per 1,000 persons were to be maintained. The number of firefighters could decrease by one before the No Action service level of 2.2 firefighters per 1,000 persons would be affected (Socio 1996a).

Projected hospital occupancy rates during the bounding case scenario for phaseout would be slightly lower than the No Action projections. The number of physicians in the ROI could decrease by three from predicted No Action levels before the No Action service level of 2.6 physicians per 1,000 persons would be affected (Socio 1996a).

Phaseout would result in the loss of 129 vehicle trips per day. There would be no significant effect to the local road network due to this activity (Socio 1996a).